

L 11283-63

PF-4--RM/WW/MAY

ACCESSION NR: AP3003783

EPR/EPF(c)/EWP(j)/EWT(m)/BDS--AFFTC/ASD--Ps-4/Pc-4/

S/0190/63/005/007/0966/0968

AUTHOR: Shostakovskiy, M. F.; Skvortsova, G. G.; Samoylova, M. Ya.

74

73

TITLE: Free-radical copolymerization of m-aminophenol vinyl ether and methyl methacrylate

SOURCE: Vysokomolekulyarnye soyedineniya, v. 5, no. 7, 1963, 966-968

TOPIC TAGS: free-radical copolymerization, copolymer, amino-group-containing copolymer, m-aminophenol vinyl ether, methyl methacrylate, azobis-isobutyronitrile, monomer concentration, monomer reactivity ratio, copolymer heat resistance, copolymer solubility, copolymer reactivity, crosslinked copolymer, ion exchanger

ABSTRACT: New copolymers, which contain amino groups and are of interest as heat-resistant ion-exchange resins, have been synthesized in yields of about 20% by free-radical [bulk] copolymerization of m-aminophenol vinyl ether ( $M_1$ ) and methyl methacrylate ( $M_2$ ) at 60  $\pm$  1°C in the presence of azobis-isobutyronitrile. The monomers were reacted in various ratios.  $M_1$  in a high initial concentration yielded a copolymer which is almost equimolar in composition; at high  $M_2$  concentrations the main product was poly(methyl methacrylate). The  $M_1$  and  $M_2$  reactivity

Card 1/2

L 11283-63  
ACCESSION NR: AP3003783

ratios were found to be  $0.75 \pm 0.05$  and  $0.07 \pm 0.02$  respectively. As  $M_1$  does not homopolymerize in the presence of various initiators, it is assumed that the growth of the chain during copolymerization is caused by  $M_2$ , which forms a reactive radical with the initiator and involves  $M_1$  in the reaction. The copolymers are white or light-yellow powders or transparent films, and are insoluble in water, acids, alkalis, and many organic solvents. They withstand temperatures of up to 250°C and decompose at 300°C without melting. The copolymers were crosslinked owing to the presence of reactive  $-NH_2$  and  $-COOCH_3$  groups in the side chains. Crosslinking was confirmed by the behavior of the copolymers in chemical reactions and their insolubility in the above solvents. Orig. art. has: 1 formula and 1 table.

ASSOCIATION: Irkutskiy institut organicheskoy khimii SO AN SSSR (Irkutsk Institute of Organic Chemistry, SO AN SSSR)

SUBMITTED: 23Nov63

DATE ACQ: 08Aug63

ENCL: 00

SUB CODE: CH

NO REF SOV: 004

OTHER: 001

ls/OS  
Card 2/2

PRILEZHAYEVA, Ye.N.; SHOSTAKOVSKIY, M.F.

"Thiolation" reactions of ethylene derivatives. *Usp.khim.* 32  
no.8:897-947 Ag '63. (MIRA 16:9)

1. Institut organicheskij khimii AN SSSR imeni Zelinskogo.

S/079/63/033/001/023/023  
D204/D307

AUTHORS: Shostakovskiy, M. F., Vleasov, V. M. and Mirskov, R.G.

TITLE: Synthesis of the acetylenic esters of organotin

PERIODICAL: Zhurnal obshchey khimii, v. 33, no. 1, 1963, 324

TEXT: Compounds  $\text{Et}_3\text{SnORC}\equiv\text{CH}$  (where R= $\text{CH}_3$ ,  $(\text{CH}_2)_2$ ,  $\text{CH}(\text{CH}_3)_2$ , or  $\text{C}(\text{CH}_3)_3$ ) were obtained by: (a) treating  $\text{BrMgC}\equiv\text{CRO}\text{MgBr}$  (obtained from  $\text{EtMgBr}$  and butyn-1-ol-4) with triethylchlorostannane, heating for 8 hours at  $100^\circ\text{C}$ , cooling and adding water to the reaction mixture. The organic layer was separated, dried, the solvent (ether) was evaporated and the products were fractionated; (b) heating acetylenic alcohols (pretreated with Na) with  $\text{Et}_3\text{SnCl}$  on a water bath. The compounds, whose structure was confirmed by ir spectroscopy, did not react with vinyl esters with the formation of acetals.

Card 1/2

S/079/63/033/001/023/023  
D204/D307

Synthesis of the ...

ASSOCIATION: Irkutskiy institut organicheskoy khimii Sibirskeogo  
otdeleniya Akademii nauk SSSR (Irkutsk Institute of  
Organic Chemistry of the Siberian Branch of the  
Academy of Sciences, USSR)

SUBMITTED: August 30, 1952 [Sic]

Card 2/2

ACCESSION NR: AP3001485

5/0079/63/033/005/1696/1696

AUTHOR: Shostakovskiy, M. F.; Sokolov, B. A.; Kozienko, A. I.; Sultangareyev, R. O.; Yermakova, L. T.

TITLE: High temperature condensation of fluorohydrosilanes with chlorobenzene

SOURCE: Zhurnal obshchey khimii, v. 33, no. 5, 1963, 1696

TOPIC TAGS: methylphenyldifluorosilane

ABSTRACT: Methyl difluorohydrosilane was condensed with chlorobenzene at 640 degrees to form methylphenyldifluorosilane.

ASSOCIATION: Irkutskiy institut organicheskoy khimii Siberskogo otdeleniya akademii nauk SSSR (Irkutskiy Institute of Organic Chemistry, Siberian Division, Academy of Sciences, SSSR)

SUBMITTED: 28Dec62

DATE ACQ: 17Jun63

ENCL: 00

SUB CODE: 00

NO REF Sov: 000

OTHER: 000

Card 1/1

SHOSTAKOVSKIY, M.F.; VLASOV, V.M.; MIRSKOV, R.G.

Synthesis of organotin acetylenic acetals. Zhur.ob.khim. 33  
no.6;2076 Je '63. (MIRA 16:7)

1. Irkutskiy institut organicheskoy khimii Sibirskogo otdeleniya  
AN SSSR.  
(Tin organic compounds) (Acetal) (Acetylene compounds)

GRACHEVA, Ye.P.; LABA, V.I.; KUL'BOVSKAYA, N.K.; SHOSTAKOVSKIY, M.F.

Synthesis and transformations of substituted vinyl ethers.  
Part 13: Stereochemistry of the reaction of addition of thiols  
to tert-butylacetylene. Zhur. ob. khim. 33 no.8:2493-2501.  
(MIRA 16:11)  
Ag '63.

1. Institut organicheskoy khimii AN SSSR.

GRACHEVA, Ye.P.; LABA, V.I.; SHOSTAKOVSKIY, M.F.

Synthesis and transformations of substituted vinyl ethers. Part  
14: Synthesis of  $\alpha$ -~~tert~~-butylvinylalkyl sulfides and some  
of their properties. Zhur. ob. khim. 33 no.8:2501-2509 Ag '63.  
(MIRA 16:11)

1. Institut organicheskoy khimii AN SSSR.

SHOSTAKOVSKIY, M.F.; SKVORTSOVA, G.G.; ZAPUNNAYA, K.V.; SHERGINA, N.I.;  
CHIPANINA, N.N.

Infrared spectra of complexes formed by vinyl ethers of phenol,  
o-aminophenol, and aniline with stannic chloride. Dokl. AN SSSR  
149 no.4:862-864 Ap '63. (MIRA 16:3)

1. Irkutskiy institut organicheskoy khimii Sibirskogo otdeleniya  
AN SSSR. 2. Chlen-korrespondent AN SSSR (for Shostakovskiy).  
(Vinyl compounds—Absorption spectra) (Tin chlorides)

SHOSTAKOVSKIY, M.F.; KHOMUTOV, A.M.; ALIMOV, A.P.

Copolymerization of vinyl chloroacetate with vinyl ethers and styrene.  
Izv. AN SSSR Ser. khim. no.10:1839-1843 O '63.

Polymerization of vinyl alkyl ethers in the presence of organomagnesium  
compounds. 1843-1846 (MIRA 17:3)

1. Institut organicheskoy khimii im. N.D.Zelinskogo AN SSSR.

ACCESSION NR: AP4015148

S/0289/63/000/003/0092/0096

AUTHORS: Shostakovskiy, M.F.; Sokolov, B.A.; Khil'ko, O.N.;  
Balezina, G.G.; Alekseyeva, G.M.

TITLE: Addition of silane hydrides to vinyl ethers

SOURCE: AN SSSR. Sib. otd. Izv., no. 11. Ser. Khim. nauk, no. 3,  
1963, 92-96TOPIC TAGS: silicohydride, silane, silane hydride, addition re-  
action, vinyl ether addition reaction, trichlorosilane ether,  
dichloromethylsilane ether, dichloroethylsilane ether, triethyl-  
silane ether, beta ether, Markownikoff rule, Raman spectrumABSTRACT: The addition of trichlorosilane, methyldichlorosilane,  
ethyldichlorosilane, and triethylsilane to vinylisopropyl-, vinyl-  
butyl-, vinylphenyl-, vinyl-*o*-, *m*- and *p*-cresyl ethers were studied.  
The addition of equimolar amounts of silane and vinyl ether was  
effected by heating and using chloroplatinic acid as the catalyst  
(beta-phenoxyethyltriethylsilane was prepared by the Grignard re-

Card 1/2

ACCESSION NR: AP4015148

action). The following new compounds were prepared and characterized: the beta-phenoxyethyl-, the beta-c-cresoxy ethyl, the beta-m-cresoxyethyl, and the beta-p-cresoxyethyl- trichlorosilanes; -dichloromethylsilanes, dichloroethylsilanes, and -triethylsilanes; the beta-butoxyethyl-dichloromethylsilane, dichloroethylsilane and triethylsilane; and the beta-isopropoxyethyl dichloroethylsilane. The presence of the beta structure in the products, contrary to Markownikoff's rule, was confirmed by Raman spectra and chemical decomposition. "Spectra were taken by N.I. Golovanov, for which the authors express their appreciation." Orig. art. has: 1 table and 1 equation.

ASSOCIATION: Irkutskiy institut organicheskoy khimii Sibirskogo  
otdeleniya AN SSSR (Irkutsk Institute of Organic Chemistry, Siberian  
branch AN SSSR)

SUBMITTED: 03Aug62

DATE ACQ: 13Mar64

ENCL: 00

SUB CODE: CH

NO REF SOV: 005

OTHER: 006

Card 2/2

L 23072-65 EWT(m)/EPP(c)/EWP(j)/T Pc-4/Pr-4 RM

ACCESSION NR: AR4048483

S/0081/64/000/013/S008/S009

SOURCE: Ref. zh. Khimiya, Abs. 13S57

AUTHOR: Shostakovskiy, M. F.; Skvortsova, G. G.; Zapunnaya, K. V.

TITLE: Cationic polymerization of vinylaryl ethers. I. Complex formation during the polymerization of vinyl ethers of phenol and o-aminophenol

CITED SOURCE: Sb. Vy\*okomolekul. soyedineniya. Karbotsepn. vy\*okomolekul. soyedineniya. M., AN SSSR, 1963, 216-218

TOPIC TAGS: cationic polymerization, polymerization catalyst, vinylaryl ether, stannic chloride, polyether synthesis, active complex formation, carbonium ion

TRANSLATION: During the polymerization and copolymerization of vinyl ethers of phenol and o-aminophenol under the influence of  $SnCl_4$ , active complexes are formed between the catalyst and the monomer. These crystalline complexes remain active after extraction from the reaction medium and produce polymerization of freshly distilled vinyl monomers. The structure of the complex changes during the time it remains in the reaction mixture: the resistance to high temperatures gradually increases and the solubility decreases. A scheme is suggested for the

Card 1/2

L 23072-65

ACCESSION NR: AR4048483

initiation of polymerization by formation of an active complex between  $\text{SnCl}_4$  and the vinyl ether of o-aminophenol, according to which  $\text{SnCl}_4$  reacts with the oxygen in the vinyl ether and then apparently forms a carbonium ion which begins the growth of the polymer chain. The ultraviolet spectra of the active complexes were studied. Authors' abstract

ASSOCIATION: None

SUB CODE: OC

ENCL: 00

Card 2/2

SHOSTAKOVSKIY, M.F.; SHMONINA, L.I.; TIKHOMIROVA, I.M.

Reactivity of -halo vinyl alkyl ethers. Izv. AN SSSR.  
Ser. khim. no.12:2193-2196 D '63. (MIRA 17:1)

1. Institut organicheskoy khimii im. N.D. Zelinskogo AN SSSR.

SHAPIRO, E.S.; SHOSTAKOVSKIY, M.F.

Exchange reaction of vinyl acetate with phthalyl amino acids. Izv. AN SSSR. Ser. khim. no.12:2221-2222 D '63.  
(MIRA 17:1)

1. Institut organicheskoy khimii im. N.D. Zelinskogo AN SSSR.

SHUYKIN, N.I.; BEL'SKIY, I.F.; SHOSTAKOVSKIY, V.M.; KHAR'KOV, S.N.;  
GAYVORONSKAYA, G.K.

Conversion of  $\alpha$ -ketocarboxylic acid esters to lactams.  
Dokl. AN SSSR 153 no.3:628-630 N '63. (MIRA 17:1)

1. Institut organicheskoy khimii im. N.D. Zelinskogo AN SSSR.  
2. Chlen-Korrespondent AN SSSR (for Shuykin).

SHOSTAKOVSKIY, M.F.; SIDEL'KOVSKAYA, F.P.; AVETISYAN, A.A.; ZELENSKAYA, M.G.; LOPATIN, B.V.

N-vinylthiopyrrolidone. Dokl. AN SSSR 153 no. 5:1089-1092  
(MIRA 17:1)  
D '63.

1. Institut organicheskoy khimii im. N.D. Zelinskogo  
AN SSSR. 2. Chlen-korrespondent AN SSSR (for Shostakovskiy).

SHOSTAKOVSKIY, M.F.; CHEKULAYEVA, I.A.; KONDRAT'YEVA, L.V.

Interaction of diacetylene with bifunctional compounds.  
Dokl. AN SSSR 153 no.6:1353-1355 P 'o3. (MIRA 17:1)

1. Institut organicheskoy khimii im. N.D. Zelinskogo AN SSSR.
2. Chlen-korrespondent AN SSSR (for Shostakovskiy).

ACCESSION NR: AP4010042

S/0062/64/000/001/0127/0132

AUTHOR: Dolgikh, A. N.; Bogdanova, A. V.; Plotnikova, G. I.;  
Ushakova, T. M.; Shostakovskiy, M. F.TITLE: Investigation of diacetylene derivatives  
Report 10. Interaction between ethinylvinylthioethers and water

SOURCE: AN SSSR. Izvestiya. Ser. khim., no. 1, 1964, 127-132

TOPIC TAGS: diacetylene derivatives, ethinylvinylthioethers,  
ethinylvinylalkyloxo, thio or nitroethers, triple bond reactivity,  
cix-configuration, keto-enol resonance, enol stabilization, thio-  
vinyl group, thicketo group, mercaptan addition productsABSTRACT: Since the compounds  $\text{CH}\equiv\text{C}-\text{CH}=\text{CH}-\text{OR}$  do not react with water  
in a neutral medium even under heating, hydration of the triple bond  
proceeded under the influence of  $\text{HgSO}_4$  and heat to form the corres-  
ponding 2-acetylvinylalkylsulfides and their tautomeric 3-oxybuta-  
diene-1,3-yl-acetylvinylalkylsulfides, a new series of diacetylene

Card 1/2

ACCESSION NR: AP4010042

derivatives. The possibility of keto-enol tautomerism of the derivatives and conditions for stabilization of the enol form - cis-configuration and bond formation between the H of the OH-group and S, resulting in a six-membered ring - are discussed. The IR spectra confirmed presence of the cis-configuration. Acid hydration (10%  $H_2SO_4$ ) yielded mainly 2-acetylvinylalkylsulfide. In the interaction with water, in compounds of the type  $CH \equiv C-CH=CH-XR$  where X = S, O, N, the sulfur atom, like O or N, increased the reactivity of the triple bond, compared to that in vinylacetylene. This influence appeared in the order N > O > S. The syntheses are described, as are yields and end products. Orig. art. has: 8 formulas.

ASSOCIATION: none

SUBMITTED: 22Aug63

DATE ACQ: 14Feb64

ENCL: 00

SUB CODE: CH

NO REF SOV: 011

OTHER: 005

Card 2/2

KONDRAT'YEVA, L.V.; CHEKULAYEVA, I.A.; SHOSTAKOVSKIY, M.F.; LOPATIN, B.V.

Addition of unsaturated amines to diacetylene. Izv.AN SSSR.  
Ser.khim. no.1:160-162 Ja '64. (MIRA 17:4)

1. Institut organicheskoy khimii im. N.D.Zelinskogo AN SSSR.

L 27255-65 EWT(m)/EPF(c)/EWP(j)/T Pe-4/Pr-4 RM

ACCESSION NR: AP4047790

S/028P/64/000/002/0152/0153

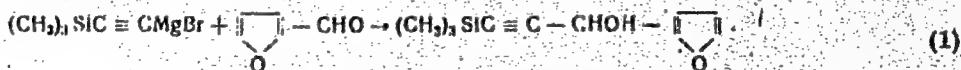
AUTHOR: Shostakovskiy, M. F.; Komarov, N. V.; Atavin, A. S.; Yegorov, N. V.; Yarosh, O.G.

TITLE: Synthesis of trimethylsilylithynyl-alpha-furylcarbinol

SOURCE: AN SSSR. Sibirskoye otdeleniye. Izvestiya. Seriya khimicheskikh nauk, no. 2, 1964, 152-153

TOPIC TAGS: silicoorganic compound, furane derivative, alkylsilane derivative, acetylene, heterocyclic acetal

ABSTRACT: The authors studied the reactions of 1) trimethylchlorosilane with a Mg-derivative of  $\alpha$ -furylethynylcarbinol, and 2) trimethylsilylithynyl-magnesium bromide with furfural, a smoothly realizable process yielding 55-60% of trimethylsilylithynyl- $\alpha$ -furylcarbinol according to the reaction

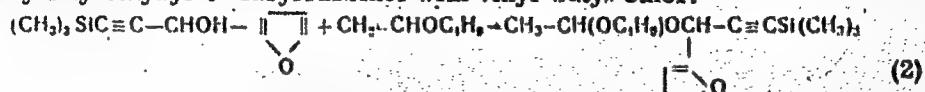


Card 1/2

L 27255-65

ACCESSION NR: AP4047790

They also prepared butyl-(3-trimethylsilyl-1- $\alpha$ -furylpropyne-2) acetal 128-129°C/3.5 mm Hg, the first representative of the silicoacetylene acetals with a heterocyclic substituent, by reacting trimethylsilyl ethynyl- $\alpha$ -furylcarbinol with vinyl-buty1 ether:



The procedures for preparing the compounds are described and analytical results identifying the products are presented. Orig. art. has: 3 formulas.

ASSOCIATION: Irkutskiy institut organicheskoy khimii Sibirskogo otdeleniya AN SSSR  
(Irkutsk organic chemistry institute, Siberian branch, AN SSSR)

SUBMITTED: 31Mar64

ENCL: 00

SUB CODE: QC, G-C

NO REF SOV: 002

OTHER: 001

Card 2/2

ACCESSION NR: AP4019015

S/0062/64/000/002/0363/0365

AUTHOR: Shostakovskiy, M. F.; Bogdanova, A. V.; Shamakhlmudova, S.

TITLE: Highmolecular polymers of vinyl-n.butyl ethers

SOURCE: AN SSSR. Izv. Seriya khimicheskaya, no. 2, 1964, 363-365

TOPIC TAGS: vinyl ether polymer, Ziegler catalyst propyl lithium, polymer, lithium, vinyl alkyl ether

ABSTRACT: The purpose of this work was to improve on Ziegler's catalyst so as to prepare stereoregulated polymers of vinyl ethers at room temperature (Ziegler catalysts require cooling due to excessive formation of the active component  $Al(i-C_4H_9)_2Cl$ ). This ether is industrially produced in the Soviet union and is the base for the important products "Vinipol" and the Shostakovskiy balsam (composition not explained). The recommended composition of the catalyst is  $VOCl_3:LiC_3H_7:Al(i-C_4H_9)_3$  in the proportion 1:1.5:3. Polymerization takes place at room temperature in 2-3 hours. The polymers are colorless, and the catalyst readily removable and universal for vinyl alkyl ethers of different structures. The polymers have a molecular weight of  $1.46 \cdot 10^6$ . Their radiograms are

Card: 1/2

ACCESSION NR: AP4019017

S/0062/64/000/002/0382/0384

AUTHORS: Shostakovskiy, M.F.; Komarova, L.I.; Pukhnarevich, V.B.;  
Komarov, N.V.; Roman, V.K.

TITLE: 3,5-dinitrobenzoylhydrazones of organo silicon carbonyl com-  
pounds

SOURCE: AN SSSR. Izv. Seriya khimicheskaya, no. 2, 1964, 382-384

TOPIC TAGS: dinitrobenzoyl hydrazone, dinitrobenzoyl hydrazide,  
organo silicon carbonyl reagent, hydrozone, carbonyl

ABSTRACT: In the search for a reagent able to identify organo silicon carbonyl compounds, the authors found that 3,5-dinitrobenzoylhydrazide readily forms good crystallizing 3,5-dinitrobenzoylhydrazones with organo silicon aldehydes and ketones. In this respect, the reagent is different from 2,4-dinitrophenylhydrazine, semi-carbazide and hydroxylamine. The tendency of organo silicon aldehydes and ketones to form these compounds and yields greatly depends on their structure. Thirteen compounds were investigated from this point of view and their behavior recorded in a comprehen-

Card: 1/2

ACCESSION NR: AP4025011

S/0062/64/000/003/0543/0548

AUTHORS: Bogdanova, A.V.; Shostakovskiy, M.F.; Shamakhmudova, S.

TITLE: New simple vinyl ether polymers. Communication 3. Homogeneous catalyst for stereospecific polymerization at room temperatures.

SOURCE: AN SSSRL Izv. Seriya khimicheskaya, no. 3, 1964, 543-548

TOPIC TAGS: vinyl ether polymer, stereospecific polymer, stereospecific polymerization, homogeneous catalyst, modified Ziegler catalyst, polymerization activation, stereospecificity, stereospecific orientation, aluminum isobutyl containing catalyst, diisobutylaluminum chloride catalyst, catalyst component function, vinylbutyl ether polymer, vinylisobutyl ether polymer, vinylcyclohexyl ether polymer, vinyldecalyl ether polymer, molecular weight, viscosity, solubility, x ray pattern.

ABSTRACT: The modified Ziegler heterogeneous catalyst ( $TiCl_4$ ,  $LiC_3H_7$  and  $Al(i-C_4H_9)_3$ ) requires investigation to determine which component is responsible for activating the polymerization and which for directing stereospecificity. High viscosity high molecular weight stereospecificity.

Card 1/3

ACCESSION NR: AP4025011

specific vinyl ethers were obtained at room temperature by using a ratio of the above components of 0.5:0.5:2. The vinylisobutyl ether thus prepared had an even higher viscosity than a polymer prepared with the new homogeneous catalyst  $\text{Al}(\text{i-C}_4\text{H}_9)_3:\text{Al}(\text{i-C}_4\text{H}_9)_2\text{Cl}$ . This catalyst, with an  $\text{Al}(\text{i-C}_4\text{H}_9)_3:\text{Al}(\text{i-C}_4\text{H}_9)_2\text{Cl}$  ratio of up to 3:1 was found suitable for stereospecific polymerization at room temperature. Polymers of vinyl-n-butyl-, vinylisobutyl-, vinylcyclohexyl-, and vinyldecalyl ethers were obtained in good yield (75-90%) with this catalyst. The molecular weight (vinyl-n-butyl ether  $7.4 \times 10^5$ , vinylisobutyl ether  $1.38 \times 10^6$ ), viscosity, solubility (97-99% in boiling acetone), and x-ray patterns of these polymers were determined. "The authors thank L.S. Yasenko for determining the molecular weight of the polymers by the light diffusion method." Orig. art. has: 1 table, 1 figure and 1 equation.

ASSOCIATION: Institut organicheskoy khimii AN SSSR im. N. D. Zelinskogo (Institute of Organic Chemistry, "AN SSSR")

Card 2/3

SHOSTAKOVSKIY, M. F.; VIASOV, V. N.; VASIL'YEVA, A. A.

Problem of the preparation of acetylenic  $\gamma$ -glycols and some of their transformations. Report No. 1: Synthesis of  $\gamma$ -glycols on the basis of 1-butyn-3-ol. Izv AN SSSR Ser Khim no. 4:696-698 Ap '64. (MIRA 17:5)

1. Irkutskiy institut organicheskoy khimii Sibirskogo otdeleniya AN SSSR.

ACCESSION NR: AP4033388

S/0062/64/000/004/0709/0715

AUTHOR: Shamakhmudova, S.; Bogdanova, A. V.; Shostakovskiy, M. F.

TITLE: New polymers of simple vinyl ethers. Communication 4. Stereospecific copolymerization of simple vinyl ethers with methylacrylate and methylmethacrylate at room temperature.

SOURCE: AN SSSR. Izvestiya. Seriya khimicheskaya, no. 4, 1964, 709-715 and top half of insert facing page 712

TOPIC TAGS: vinyl ether polymer, vinyl ether copolymer, vinyl ether methylacrylate copolymer, stereospecific copolymerization, methylacrylate polymer, methylmethacrylate polymer, homogeneous catalyst system, triisobutylaluminum, diisobutylaluminum chloride, heterogeneous catalyst system, thermal stability, thermomechanical property, elongation, solubility, x ray analysis, elastic state, stereoregular polymer, stereoregular copolymer

ABSTRACT: Conditions for polymerizing methylacrylate and methylmethacrylate and for the stereospecific copolymerization of these with simple vinyl ethers were investigated. Three catalyst systems were tried for the copolymerizations:

Card

1/3

ACCESSION NR: AP403388

(1) heterogeneous system of 1:1:4  $TiCl_4$ : $LiC_3H_7$ : $Al(iC_4H_9)_3$ ; (2) homogeneous system of 1:3  $Al(iC_4H_9)_2Cl$  and  $Al(iC_4H_9)_3$ ; (3) heterogeneous system of 1:1.5:3  $VOCl_3$ : $LiC_3H_7$ : $Al(iC_4H_9)_3$ . The homogeneous system proved most favorable. Continuing the polymerization increased the yield of the copolymers but did not change their composition. The solubility in organic solvents of the copolymers of simple vinyl ethers with methacrylate is limited, causing difficulty in separating the copolymer from the catalyst. In a benzene-soluble fraction, the solubility of the methacrylate and methylmethacrylate polymers are high melting thermally stable materials. The copolymers have a significant range in the highly elastic state. From thermomechanical x-ray and solubility studies it is concluded that the structures of these polymers and copolymers are stereoregular. Orig. art. has: 4 tables and 4 figures.

ASSOCIATION: Institut organicheskoy khimii im. N. D. Zelinskogo Akademii nauk SSSR (Institute of Organic Chemistry, Academy of Sciences, SSSR)

SUBMITTED: 15Nov63

DATE ACQ: 15May64

ENCL: 00

Card

2/3

ACCESSION NR: AP4033388

SUB CODE: OC

NO REF Sov: 011

OTHER: 001

Card 3/3

YAKOVLEVICH, N.P.; KOMAROV, N.V.; MUSYAIN, V.V.; TAINICHKOVSKAYA, N.N.

~~Structure of interaction between stannanol and the lotsicin parent.~~  
Izv. Akad. Nauk. SSSR. Ser. Khim. no.6:1102-1104 (1970).

.. Institut organicheskoy khimii Sibirskogo otdeleniya AN SSSR.

SHCHETAKOVSKIY, M.F.; SHURGINA, N.N.; KOLANOV, N.V.; BRONSKAYA, S.I.;  
PPONINA, T.I.

Vibrational spectra of some organosilicon acetylene and diacetylene  
compounds. Izv. AN SSSR. Ser. Khim. no.6:1126-1128 Je '64.  
(MIRA 17:11)

1. Institut organicheskoy khimii Sibirskogo otdeleniya AN SSSR.

SHOSTAKOVSKIY, M.F.; SHERGINA, N.I.; BRODSKAYA, E.I.; YAROSH, O.G.; KOMAROV, N.V.

Vibrational spectra of ethinylsilanes. Dokl. AN SSSR 158 no.5:1143-1145  
0 '64. (MIRA 17:10)

1. Irkutskiy institut organicheskoy khimii Sibirskogo otsteleniya AN SSSR.
2. Chlen-korrespondent AN SSSR (for Shostakovskiy).

SHOSTAKOVSKIY, M.F.; VLASOV, V.M.; MIRSKOV, R.G.

Synthesis of organotin oxygen-containing compounds of the  
acetylene series. Dokl. AN SSSR 159 no. 4:869-871 D 164  
(MIRA 18:1)

1. Institut organicheskoy khimii Sibirskogo otdeleniya AN SSSR,  
Irkutsk. 2. Chlen-korrespondent AN SSSR (for Shostakovskiy).

L 10825-65 EWT(m)/EPF(c)/EPR/EWP(j)/T Pe-l<sub>4</sub>/Pr-l<sub>4</sub>/Ps-l<sub>4</sub> RPL RM/WW

ACCESSION NR: AP4045425

S/0190/64/006/009/1585/1590

AUTHOR: Sidel'kovskaya, F. P.; Shostakovskiy, M. F.; Ibragimov, F.; Askarov, M. A.

TITLE: Copolymerization of N-vinyllactams with vinylalkyl ethers

SOURCE: Vy'sokomolekulyarnye soyedineniya, v. 6, no. 9, 1964, 1585-1590

TOPIC TAGS: copolymer, copolymerization initiator, diazoisobutyronitrile, N-vinyllactam, vinylalkyl ether, N-vinylpyrrolidone, N-vinylcaprolactam, vinylethyl ether, vinylisopropyl ether, vinylbutyl ether

ABSTRACT: Diazoisobutyronitrile was used as the initiator in a study of the copolymerization of N-vinylpyrrolidone (b. p. 94-95C/4 mm,  $d_4^{20} = 1.0458$ ) and N-vinylcaprolactam (b. p. 94-95C/4 mm,  $d_4^{20} = 1.029$ ) with vinylethyl ether, vinylisopropyl ether and vinyl-n-butyl ether. 5 g of monomer mixture, containing 0.1, 0.25, 0.50, 0.75, 0.90, and 1.0 mol of individual monomers, were reacted at 60  $\pm$  1C for 72 hrs with 0.2% of the dinitrile in sealed ampoules gassed with N<sub>2</sub>. The process produced 17 copolymers with a yield of up to 85.7% of theory and molecular weights of 550-1500. Nitrogen content, solubility, molecular weight (cryoscopically in benzene), viscosity at 20C in dimethylformamide, and the copolymerization constants (graphically from the Mayo-Lewis integral equation) were determined for the copolymers and conditions were established for the preparation of

Card 1/2 Copolymerization of N-vinyl lactams with vinylalkyl ethers



L 18281-65 EWT(m)/EPF(c)/EWP(j) Pe-4/Pr-4 AFMD(t)/AS(mp)-2/BSD/RAEM(a)/  
SSD(c)/AFWL/ESD(gs)/ESD(t) RM S/0062/64/000/009/1606/1610  
ACCESSION NR: AP4045798

AUTHOR: Shostakovskiy, M. F.; Shergina, N. I.; Komarov, N. V.; Maroshin, Yu. V.

TITLE: Vibration spectra of vinylacetylenic oxygen-containing organosilicon compounds

SOURCE: AN SSSR. Izv. Seriya khimicheskaya, no. 9, 1964, 1606-1610

TOPIC TAGS: vinylacetyleneorganosilane, vinylacetylenic organosiloxane, vinylacetylenic organosilanol, vibration spectrum, IR spectru, Raman spectrum, vinylacetylene group, vibration frequency, vibration intensity

ABSTRACT: The IR spectra and the Raman spectra of vinylacetylenic oxygen-containing organosilicon compounds were examined to determine if the oxygen containing groups-COH, SiOH, COSi and SiOSi in the alpha-position with respect to the acetylenic bond had any significant effect on the vibrations of the vinylacetylene group. Data was obtained for the following compounds: dimethylvinylethynylcarbinol (I), dimethylvinylethynylsilanol (II), dimethylvinylethynylmethoxytrimethylsilane (III), pentamethylvinylethynylsiloxane (IV), dimethylvinylethynyl-

Card 1/2

L 18281-65

ACCESSION NR: AP4045798

methoxymethylethylsilane (V), bis(dimethylvinylethynylmethoxy)dimethylsilane (VI), hexamethyl-1, 3-di(vinylethynyl)trisiloxane (VII), and tetramethyl-1, 2-di(vinylethynyl)disiloxane (VIII). The band characteristic of the acetylenic bond does not appear in the IR spectra of the vinylacetylenic alkoxy silanes V, V, VI, and in I; in the analogous organosilicon compounds II, III, VII and VIII, the C≡C characterizing bands appear, at somewhat lower frequencies but higher intensities than in vinylacetylenic hydrocarbons. On the other hand the vinylacetylene group had little effect on the vibration frequency of the Si-OH, C-OH, Si-O-Si and C-O-Si bonds. The values for the double bond frequencies characteristic of the vinyl group remained essentially constant in all the compounds investigated. Orig. art. has: 1 table and 1 figure.

ASSOCIATION: Irkutskiy institut organicheskoy khimii Sibirskogo otdeleniya  
AN SSSR (Irkutsk Institute of Organic Chemistry Siberian Department AN SSSR)

SUBMITTED: 29Dec62

SUB CODE: OC, GC

ENCL: 00  
NO REF SOV: 010

OTHER: 001

Card 2/2

SHOSTAKOVSKIY, M.F.; ATAVIN, A.S.; TROFIMOV, B.A.; GUSAROV, A.V.; GLADKOVA,  
G.A.

Interaction of mercaptans with cyclic acetals. Izv.AN SSSR.fer.khim.  
no.9:1686-1687 S '64. (MIRA 17:10)

1. Irkutskiy institut organicheskoy khimii Sibirskogo otdeleniya  
AN SSSR.

L 31365-65 EWT(m)/EPF(c)/EWP(j)/T/EWP(t)/EWP(b) PC-4/Pr-4 IJP(c) JD/RM

ACCESSION NR: AP4047398

S/0062/64/000/010/1848/1853 30

21

B

AUTHOR: Shostakovskiy, M. F.; Khomutov, A. M.; Alimov, A. P.

TITLE: Stereospecific polymerization of vinyl-n. butyl ether at room temperature in the presence of sulfuric acid-aluminum sulfate complex

SOURCE: AN SSSR. Izvestiya. Seriya khimicheskaya, no. 10, 1964, 1848-1853

TOPIC TAGS: vinyl butyl ether, stereospecific polymerization, aluminum sulfate complex, polymerization catalyst

ABSTRACT: Vinyl-n. butyl ether stereospecific polymers having a molecular weight of  $9.5 \times 10^5$  and containing an MEK-insoluble fraction were obtained in 80-95% yields by homogeneous polymerization at room temperature in the presence of the catalytic sulfuric acid-aluminum sulfate complex. The insoluble fraction had a crystalline structure. The effects of polymerization time and temperature, and monomer and catalyst concentrations on the polymerization process were investigated. The highest molecular weight polymer was obtained at 30C,

Card 1/2

L 31365-65

ACCESSION NR: AP4047398

3

but varying temperature from 0-40C had little effect on the yield of the insoluble fraction. The effect of changing monomer concentration from 0-10 wt. % was insignificant, but an increase to 20 wt. % reduced the yield, molecular weight and insolubles. Varying monomer:catalyst ratio from 8000:1 to 128000:1 resulted in little change, but reducing the ratio to 2000:1 lowered product yield and molecular weight. Polymerization under a nitrogen atmosphere or in the presence of antioxidants had little effect on the process. The sulfuric acid-aluminum sulfate complex was not nearly as sensitive as the Ziegler catalyst to impurities in the monomer or solvent. This lesser need for careful purification in the polymerization system makes this catalyst for the stereospecific polymerization of vinyl-n. butyl ether commercially interesting. "The polymer x-rays were taken by L. G. Vorontsov and the IR spectra by B. V. Lopatin, which the authors acknowledge." Orig. art. has: 2 figures and 3 tables

ASSOCIATION: Institut organicheskoy khimii im. N. D. Zelinskogo Akademii nauk SSSR (Institute of Organic Chemistry, Academy of Sciences SSSR)

SUBMITTED: 21Jan63

ENCL: 00

SUB CODE: MT, GC

NR REF SOV: 002

OTHER: 011

Card 2/2

SIDEL'KOVSAYA, F.P.; ZELENSKAYA, N.G.; MINAYeva, I.N.; SHOSTAKOVSKIY, M.F.

Lactones and lactams. Report No.24: Reactivity of  $\beta$ -pyrroliconyl-  
ethyl esters of acrylic acids. Izv. AN SSSR Ser. khim. no.11:  
2061-2063 N '64 (MIRA 18:1)

1. Institut organicheskoy khimii im. N.D. Zelinskogo AN SSSR.

SHOSTAKOVSKIY, M.F.; SIDEL'KOVSKAYA, F.P.; MINAKOVA, T.T.

Reaction of 1,1,3-tri-( $\beta$ -chloroethoxy)propane with some sodium  
alcoholates. Izv. AN SSSR Ser. khim. no.11:2106-2108 N '64  
(MIRA 18:1)

1. Institut organicheskoy khimii im. N.D. Zelinskogo AN SSSR.

SHOSTAKOVSKIY, M.F.; MINAKOVA, T.T.; SIDEL'KOVSKAYA, F.P.

Unsaturated aldehydes. Report No.1: Properties of the products of addition of ethylene chlorohydrin to acrolein. Izv. AN SSSR Ser. khim. no.12:2197-2202 D '64 (MIRA 18:1)

1. Institut organicheskoy khimii imeni N.D. Zelinskogo AN SSSR.

SHOSTAKOVSKIY, M.F.; BOGDANOVA, A.V.; PLOTNIKOVA, G.I.

Addition of alcohols and mercaptans to the compounds with triple bonds. Usp.khim. 33 No.2:129-150 F '64.

1. Institut organicheskoy khimii imeni N.D.Zelinskogo AM SSSR.  
(MIRA 17:10)

SHOSTAKOVSKIY, M.F.; KULIBEKOV, M.R.; GORBAN', A.K.; SHOSTAKOVSKIY,  
S.M.

Synthesis of organomagnesium compounds in a medium of formals.  
Zhur. cb. khim. 34 no. 3:760-762 Mr '64. (MIRA 17:6)

1. Irkutskiy institut organicheskoy khimii Sibirskogo otdeleniya  
AN SSSR i Azerbaydzhanskiy sel'skohozyaystvennyy institut.

S/0079/64/034/004/1354/1355

ACCESSION NR: AP4034569

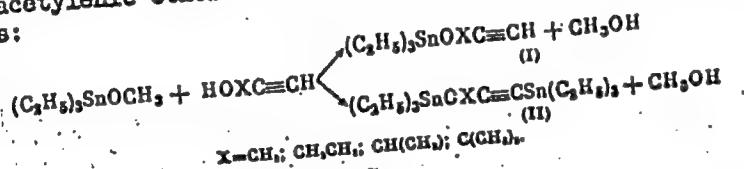
AUTHOR: Shostakovskiy, M. F.; Vlasov, V. M.; Mirakov, R. G.

TITLE: Reaction of triethylmethoxystannane with acetylenic alcohols

SOURCE: Zhurnal obshchey khimii, v. 34, no. 4, 1964, 1354-1355

TOPIC TAGS: triethylmethoxystannane acetylenic alcohol reaction, tin containing acetylenic ether, disproportionation, reaction condition, reactant ratio, acetylenic alcohol, triethylmethoxystannane, stannane

ABSTRACT: Reaction of triethylmethoxystannane with primary, secondary or tertiary acetylenic alcohols containing an acetylenic hydrogen results in the formation of tin-containing acetylenic ethers of two types, depending on reaction conditions and reactant ratios:



Card 1/3

ACCESSION NR: AP4034569

Type I compounds are formed in 80-90% yield by reacting triethylmethoxystannane with a 2-4 fold excess of acetylenic alcohol at -10°C or at room temperature for 30 minutes; 10-20% of type II compounds are also formed. Type II compounds are formed in 80% yield when a 1:1 or 1:2 ratio of stannane:alcohol is heated to 100-110°C for 3-5 hours, or on prolonged stirring at room temperature. On prolonged standing or heating the type I compounds are disproportionated according to the equation:



The following compounds were synthesized and characterized: 3-triethylstannoxy-propyn-1, 3-triethylstannoxy-1-triethylstannylpropyn-1, 4-triethylstannoxybutyn-1, 4-triethylstannoxy-1-triethylstannylbutyn-1, 3-triethylstannoxy-3-methylpropyn-1, 3-triethylstannoxy-1-triethylstannyl-3-methylpropyn-1, 3-triethylstannoxy-3,3-dimethylpropyn-1, and 3-triethylstannoxy-1-triethylstannyl-3,3-dimethylpropyn-1. Orig. art. has: 2 equations.

ASSOCIATION: Irkutskiy institut organicheskoy khimii Sibirskogo otdeleniya, Akademii nauk SSSR (Irkutsk Institute of Organic Chemistry, Siberian Division,

Card 2/3

ACCESSION NR: AP4034569

Academy of Sciences, SSSR)

SUMMITTED: 28Nov63

DATE ACQ: 11May64

ENCL: 00

SUB CODE: OG

NO REF Sov: 000

OTHER: 000

Card 3/3

SHONTAKOVSKIY, M.F.; VLASOV, V.M.; GOREV, Y. P.I.

Polyfunctional acetals. Synthesis acetylenic acetals  
based on primary and secondary acetylenic alcohols and  
vinyl alkyl ethers. Zhur. ob. khim. 34, no. 5:1403-1407  
(MTRA 17:7)  
Mys '64.

1. Irkutskiy institut organicheskoy khimii Sibirskogo otdeleniya  
AN SSSR.

VORONKINA, T.M.; STRUKOV, I.T.; SHOSTAKOVSKIY, M.F.

Synthesis of precursors and fragments of antibiotics. Part  
12; Condensation of organosilicon compounds with thioglycol  
acid and its ethyl ester. Zhur. ob. khim. 34 no. 5:1464-1467  
My '64. (MIRA 17:7)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut antibiotikov.

SHOSTAKOVSKIY, M.F.; VLASOV, V.M.; NIKIFOROV, A.A.

Interaction of cyclic acetals with thiophenol. Zhur. ob.  
khim. 34 no. 5:1686-1687 My '64. (MIRA 17:7)

I. Irkutskiy institut organicheskoy khimii Sibirskogo  
otdeleniya AN SSSR.

SHOSTAKOVSKIY, M. F.; ATAVIN, A. S.; TROFIMOV, B. S.; ORLOVA, S. Ye.;  
KEYKO, V. V.

Decomposition of 1-( $\alpha$ -chloroethoxy)-2-acetoxyethane. Zhur.  
ov. Khim. 34 no.6:2089-2090 Je '64. (MIRA 17:7)

1. Irkutskiy institut organicheskoy khimii Sibirskogo otdeleniya  
AN SSSR.

SHOJTAKOVSKIY, M.P.; ATAVIN, A. S.; TROFIMOV, B. A.

On 1,3-Dioxolane ring opening by organomagnesium compounds. Zhur.  
ob. Khim. 34 no.6:2088-2089 Je '64.

Synthesis of  $\varepsilon$ -methylene  $\beta$ -ether alcohols. Ibid.:2089  
(MIRA 17:7)

U. Irkutskiy institut organicheskoy khimii Sibirskego otdeleniya  
AN SSSR.

L 6646-65 EWT(m)/EPF(c)/EWP(j)/T PC-4/Pr-4 AFETR/SSD(a)/ASD(a)-3 RM  
ACCESSION NR: AP4042746 8/0079/64/034/007/2112/2116

AUTHOR: Shostakovskiy, M. F.; Atavin, A. S.; Trofimov, B. A.

TITLE: Vinyl ethers of di- and triethylene glycol

SOURCE: Zhurnal obshchey khimii, v. 34, no. 7, 1964, 2112-2116

TOPIC TAGS: polyglycol vinyl ether, monovinyl ether, divinylether, diethylene glycol, triethylene glycol, vinylation, glycol vinylation, acetylene, reaction rate, polyglycol vinylation side products, glycol vinylation reaction condition, polymerization, polymerization catalyst, hydrolysis

ABSTRACT: This is a study of the specific features of synthesis of these ethers, their properties and the influence of reaction conditions on yield. Both mono- and divinyl ethers were prepared by the author from acetylene and the respective glycols. Details are tabulated and the synthesis described. Vinylation of the glycols under study proceeded rapidly at 130-140°C and an initial acetylene pressure of 9-12 atm. in the presence of 2-5% KOH. Yields were between 56.4 and 87.3%. The reaction rate declined as the number of C-O-C groups increased. Partial (to 10%) breakup of the polyglycols at the C-O bonds was observed. Side

57

55

Card 1/3

L 6646-65

ACCESSION NR: AP4042746

products e.g. of the triethylene vinylation were diethylene glycol divinyl ether (10%), ethylene glycol divinyl ether (1-2%) and methyldioxane (1-2%). Increasing initial acetylene pressure to 16 atm. and KOH to 7% increased divinyl ether yield from 78.4 to 91.6%. A KOH concentration of over 10% decreased yields but increased the reaction rate at decreased temperatures. Adding water decreased yield; this could be improved by increasing the alkali content. The ethers obtained were colorless fluids, soluble in most organic solvents. Their properties and IR spectra are described. Monovinyl ethers convert to polyacetals upon storage or in the presence of acids. The formula is presented. Divinyl ethers are stable upon storage. They polymerized readily in the presence of acid catalysts and gave solid polymers. Hydrolysis ( $1\% H_2SO_4$ ) of the polymer gave acetaldehyde and the corresponding glycol. The monovinyl compounds hydrolyzed more readily than the divinyl ones. Orig. art. has: 2 figures, 1 table and 1 formula.

ASSOCIATION: Irkutskiy institut organicheskoy khimii Sibirskogo otdeleniya Akademii nauk SSSR (Irkutsk Institute of Organic Chemistry, Siberian Branch, Academy of Sciences, SSSR)

ENCL: 00

SUBMITTED: 28Apr63

Card 2/3

L 6646-65  
ACCESSION NR: AP4042746

SUB CODE: CC, CC

NO REF Sov: 006

OTHER: 001

Card 3/3

L 17535-65

ENT(m)/EPF(c)/EPR/EWP(j) PC-4/Pr-4/Ps-4 RPL NW/RM  
S/0079/64/034/008/2620/2622

ACCESSION NR: AP4044194

AUTHOR: Shostakovskiy, M. F.; Sokolov, B. A.; Koziyenko, A. I.  
Yermakova, L. T.; Sultangareyev, R. G.

TITLE: High temperature condensation of chlorosilane hydrides with chloroaryl-fluoro- and chloroarylchlorosilanes

SOURCE: Zhurnal obshchey khimii, v. 34, no. 8, 1964, 2620-2622

TOPIC TAGS: chloroarylfluorosilane, chloroarylchlorosilane, condensation, high temperature condensation, synthesis

ABSTRACT: The high temperature condensation of chlorosilane hydrides with chloroarylfluorosilanes or chloroarylchlorosilanes, specifically the reactions at 620-640°C of trichlorosilane with p-chlorophenyltrifluorosilane or with p-chlorophenyltrichlorosilane, or of methyldichlorosilane with mixtures of m- and o-isomers of chlorophenyltrifluorosilane or with m-, o- and p-isomers (7:2:1 ratio) of chlorophenyltrichlorosilane, was investigated. The chloroarylfluorosilanes

Card 1/2

L 17535-65

ACCESSION NR: AP4044194

entered the high temperature condensation reaction analogously to the chloroaryl-chlorosilanes, but the compounds containing the trichlorosilyl group gave a notably higher yield of condensation products in comparison to compounds containing the trifluorosilyl group. The p-bis(trichlorosilyl)benzene [p-(Cl<sub>3</sub>Si)C<sub>6</sub>H<sub>4</sub>SiCl<sub>3</sub>] was synthesized more readily from trichlorosilane and p-chlorophenyltrichlorosilane than from trichlorosilane with p-dichlorobenzene. The following novel compounds were synthesized: p-F<sub>3</sub>SiC<sub>6</sub>H<sub>4</sub>SiCl<sub>3</sub>; m-, o-, [Cl<sub>2</sub>(CH<sub>3</sub>)Si]C<sub>6</sub>H<sub>4</sub>SiF<sub>3</sub>; p-(F<sub>3</sub>Si)C<sub>6</sub>H<sub>4</sub>SiF<sub>3</sub>; m-, o-, p-[Cl<sub>2</sub>(CH<sub>3</sub>)Si]C<sub>6</sub>H<sub>4</sub>SiCl<sub>3</sub>. Orig. art. has: no graphics

ASSOCIATION: None

SUBMITTED: 18Jun63

ENCL: 00

SUB CODE: GC

NO REF SOV: 003 OTHER: 002

Card 2/2

SHOSTAKOVSKIY, M.F.; VLASOV, V.M.; KUZNETSOVA, T.S.; GOLOVANCVA, N.I.

Synthesis of asymmetrical acetals of acetylenic glycols based  
on A.E. Favorskii's reaction. Zhur. ob. khim. 34 no.8:2804  
(MIRA 17:9)  
Ag '64.

SHOSTAKOVSKIY, M.F.; KULIBEKOV, M.R.; GORBAN', A.K.

New method of synthesizing sulfides based on exchange reactions  
between mercaptals and organomagnesium compounds. Zhur. ob. khim.  
34 no.9:2837-2839 3 '64. (MIRA 17:11)

1. Institut organicheskoy khimii AN SSSR i Irkutskiy institut  
organicheskoy khimii Sibirskogo otdeleniya AN SSSR.

L 18282-65 ENT(m)/EPF(c)/EWP(j) Po-h/Pr-h RM

ACCESSION NR: AP4046172

S/0079/ 64/034/009/2839/2842

B

AUTHOR: Shostakovskiy, M. F., Sokolov, B. A., Dmitriyeva, G. V.;  
Alekseyeva, G. M.

TITLE: The addition reaction of hydrosilanes with vinyl ethers<sup>1</sup>

SOURCE: Zhurnal obshchey khimii, v. 34, no. 9, 1964, 2839-2842

TOPIC TAGS: addition reaction, trichlorosilane, methyldichlorosilane, methyl-diethyldisilane, vinyl ether, aryl vinyl ether, alkyl vinyl ether, silane addition, siloxane

ABSTRACT: The few existing studies are listed. Addition reactions in the presence of  $H_2PtCl_6$  were studied for trichlorosilane, methyldichlorosilane, methyl-diethyldisilane and the vinyl ethers of phenol, n-chlorophenol and of 2,4-dichlorophenol, n-butyl and isobutyl alcohols. The reaction proceeds in 2 directions according to (1) and (2). Synthesis and end products are described.

Card 1/2

L 18282-65

ACCESSION NR: AP4046172



Spectroscopic investigation of both direct and inverse synthesis showed that the addition of silanes occurs at the beta carbon atom of the vinyl ether. Since intense polymerization results from the interaction of the two reagents, the yield was below 10%. Fourteen siloxanes were obtained. The reactions proceed alike for aryl- and alkyl- vinyl ethers. Hydrolysis of addition products of methyl-dichloro-silane and the various ethers yielded viscous, colorless or yellowish siloxanes with a molecular weight of 500-800. Orig. art. has: 2 formulas

ASSOCIATION: Irkutskiy institut organicheskoy khimii Sibirskogo otsteleniya Akademii nauk SSSR (Irkutsk Institute of Organic Chemistry, Siberian Department of the Academy of Sciences, SSSR)

SUBMITTED: 20Jun63

ENCL: 00

SUB CODE: GC, OC  
Card 2/2

NO REF SOV: 005

OTHER: 007

L 16063-65 EWT(m)/EPF(c)/EWP(j)/T-PC-4/Pr-4 ESD(t)/ESD(gs) RM  
ACCESSION NR: AP4046173 S/0079/64/034/009/2943/2845

AUTHOR: Shostakovskiy, M. E.; Vlasov, V. M.; Mirskov, R. G.; Loginova, I. Ye.

TITLE: Synthesis and transformation of organic tin-acetylene compounds III.  
Organic tin-acetylene acetals

SOURCE: Zhurnal obshchey khimii, v. 34, no. 9, 1964, 2843-2845

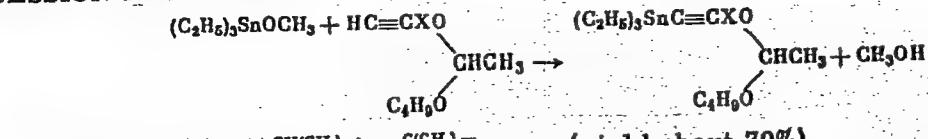
TOPIC TAGS: tin acetylene compound, tin acetylene acetal, acetylene acetal, tin acetylene compound synthesis, infrared spectrum, valence vibration

ABSTRACT: In continuation of earlier work, the interaction between non-symmetrical acetylene acetals with hexa-alkyl stannoxyane and trialkylmethoxy stannanes was studied to elucidate, in particular, the role of hydrogen in the acetylene group. Reaction of triethylmethoxystannane with non-symmetrical acetylene acetals of primary, secondary and tertiary alcohols proceeds according to the following schema:

Card 1/3

L 16063-65

ACCESSION NR: AP4046173



$\text{X} = -\text{CH}_2-; -\text{CH}_2\text{CH}_2-; -\text{CH}(\text{CH}_3)-; -\text{C}(\text{CH}_3)_2-$  (yield about 70%)

Factors such as the ratio of the 2 starter materials, removal of water during the reaction, temperature and duration of reaction were found to influence the yield; a 1:2 ratio of the stannous compound and the acetal, 100°C temperature, 3 hours' reaction time and removal of water during the reaction gave best results. Infrared spectra of the end products showed intense bands at a  $2144-2148 \text{ cm}^{-1}$  frequency corresponding to valence vibration of the  $\text{C}\equiv\text{C}$  bond at the  $\alpha$  position with respect to the Sn atom. Four reaction products are presented in a table; a 53.4% yield of 1-/1'-(triethylstannyl)propine-1'-oxy/-1-(butoxy)ethane and 64.3% of 1-/1'-(triethylstannyl)propine-1'-oxy/-1-(butoxy)-ethane was obtained. The possibility of interaction of such compounds was determined for the first time, showing the great mobility of the acetylene hydrogen atom in such reactions. Orig. art. has: 2 formulas and 1 table.

Card 2/3

L 16063-65

ACCESSION NR: AP4046173

ASSOCIATION: Irkutskiy institut organicheskoy khimii Sibirskogo otdeleniya Akademii nauk SSSR (Irkutsk Institute of Organic Chemistry, Siberian Division of the Academy of Sciences, SSSR)

SUBMITTED: 08Jul63

ENCL: 00

SUB CODE: GC, OC, MT

NO REF SOV: 002

OTHER: 000

Card 3/3

SHOSTAKOVSKIY, M.F.; VLASOV, V.M.; MIRSKOV, R.G.; LOGINOVA, I.Ye.

Synthesis and transformations of acetylenic organotin compounds.  
Part 3: Acetylenic organotin acetals. Zhur. ob. khim. 34 no.10:  
3178-3180 0 '64. (MIRA 17:11)

1. Irkutskiy institut organicheskoy khimii Sibirskogo otdeleniya  
AN SSSR.

SPYAKOVSKIY, M.F.; KOMAROV, N.V.; ATAVIN, A.S.; YEGOROV, N.V.; YAROSH, O.C.

Synthesis of trimethylsilyl ethynyl- $\alpha$ -furylcarbinol. Izv. SO AN  
SSSR n. 7 Ser. khim. nauk no. 28152-153 '64 (MIRA 18:1)

I. Irkutskiy institut organicheskoy khimii Sibirskogo otdeleniya  
AN SSSR.

ACCESSION NR: AP4019525

S/0076/64/038/002/0469/0471

AUTHOR: Smirnova, V. I.; Zhuravleva, T. S.; Shigorin, D. N.; Gracheva, Ye. P.;  
Shostakovskiy, M. F.TITLE: EPR spectra of some di-substituted acetylenes upon exposure to gamma rays  
and to light

SOURCE: Zhurnal fizicheskoy khimii, v. 38, no. 2, 1964, 469-471

TOPIC TAGS: methylphenylacetylene structure, ethylphenylacetylene structure,  
dimethylacetylene structure, electron paramagnetic resonance, acetylene, alkyl  
radical, acrylic compound, methyl, EPRABSTRACT: This is a continuation of a work by the same authors (AN SSSR, Dokl.,  
140, 149, 1961) where they described how a number of acetylenes of the  $RC \equiv CH$   
type (where R is an alkyl radical) upon exposure to gamma radiation form radicals  
where the unpaired electron is delocalized by the triple bond over the whole  
molecule. The present work transfers the above study to  $Ar - C \equiv C - R$  acrylic  
compounds of a different structure. The object of the study were: methylphenyl-  
acetylene, its deuterium tagged form, ethylphenylacetylene and dimethylacetylene.

Card 1/2

PRILEZHAYEVA, Ye.N.; PETUKHOVA, N.P.; SHOSTAKOVSKIY, M.F.

Reaction of ~~thiocacetic~~ acid with vinyl esters. Dokl. AN SSSR  
154 no.1:160-163 Ja'64. (MIRA 17:2)

1. Institut organicheskoy khimii im N.D. Zelinskogo AN SSSR.
2. Chlen-korrespondent AN SSSR (for Shostakovskiy).

SHOSTAKOVSKIY, M.F.; KOMAROV, N.V.; GUSEVA, I.S.; MISYUNAS, V.K.

Interaction between stannanols and acetylenes. Dokl. AN SSSR 158  
no.4:918-921 0 '64. (MIRA 17:11)

1. Irkutskiy institut organicheskoy khimii Sibirskogo otdeleniya  
AN SSSR. 2. Chlen-korrespondent AN SSSR (for Shostakovskiy).

SHOSTAKOVSKIY, Mikhail Fedorovich; VLASOV, Viktor Mikhaylovich;  
SHOSTAKOVSKIY, Zakhary Fedorovich; IZHEVSKIY, Konstantin  
Mikhaylovich; NIKOLAEV, V.L., red.

[Curative polymers] TSelebnye polimery. Moskva, Izd-vo  
'Znanie,' 1965. 43 p. (Novoe v zhizni, nauke, tekhnike.  
VIII Seriya: Biologiya i meditsina, no.6) (MIRA 18:5)

1. Chlen-korrespondent AN SSSR (for Shostakovskiy).

SHOSTAKOVSKIY, M.F.; ATAVIN, A.S.; ORLOVA, S.Ye.; TROFIMOV, B.A.

Synthesis of  $\alpha$ -hydroxyl alkyl ethers of asymmetric acetylenic glycols.  
(MIRA 18:7)  
Zhur. org. khim. 1 no.6:1170 Je '65.

1. Irkutskiy institut organicheskoy khimii Sibirskogo otdeleniya AN  
SSSR.

L 37570-65 EWT(m)/EPF(c)/EMP(j)/T Pg-4/Pr-4 EM  
ACCESSION NR: AP5008112 S/0062/65/000/002/0359/0362 24  
23

AUTHOR: Bogdanova, A. V.; Dolgikh, A. N.; Shostakovskiy, M. F. 3

TITLE: Synthesis of primary, secondary, and tertiary alkoxy alcohols of the "enye" series

SOURCE: AN SSSR. Izvestiya. Seriya khimicheskaya, no. 2, 1965, 359-362

TOPIC TAGS: alkoxy alcohol synthesis, primary alkoxy alcohol, secondary alkoxy alcohol, tertiary alkoxy alcohol, olefinic acetylenic alcohol, conjugated unsaturated alcohol, ethynylvinyl ether, Grignard reaction, olefinic alkoxyketol

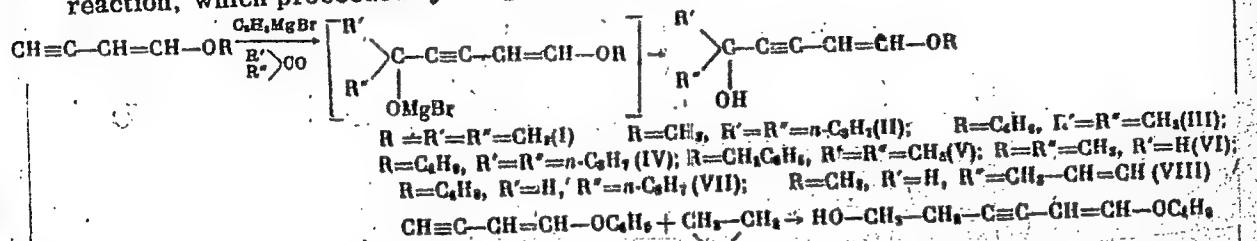
ABSTRACT: Conjugated acetylenic-olefinic primary, secondary and tertiary alkoxy-alcohols which may be used for the production of herbicides or growth accelerators were prepared by the reaction of ethynylvinylmethyl, ethynylvinylbutyl or ethynylvinylbenzyl ether with acetone, di-n-propyl ketone, acetaldehyde, n-butyraldehyde, croton-aldehyde or ethylene oxide. The alkoxy alcohols were obtained via the MgBr derivatives of ethynylvinyl ethers prepared by their reaction with  $C_2H_5MgBr$ ; the physical properties and infrared spectra of the reaction products were determined and the secondary alcohols were identified by preparing acetals with vinylethyl ether. The hydration of the alcohols gave olefinic alkoxyketols. Yields of 16.3-63% of the theoretical were produced by the

Card 1/2

L 37670-65

ACCESSION NR: AP5008112

reaction, which proceeded by the general formula



Orig. art. has: 1 table and 15 formulas.

(IX)

ASSOCIATION: Institut organicheskoy khimii im. N. D. Zelinskogo, Akademii nauk  
SSSR (Institute of Organic Chemistry, Academy of Sciences, SSSR)

SUBMITTED: 12Jun64

ENCL: 00

SUB CODE: OC

NO REF SOV: 003

OTHER: 004

Card 2/2 ps

L 37669-65 EWT(m)/EPF(c)/EWP(j)/T - Pe-4/Pr-4 RM  
ACCESSION NR: AP5008113

S/0062/65/000/002/0363/0365 12  
21

AUTHOR: Bogdanova, A. V.; Dolgikh, A. N.; Shostakovskiy, M. F.

TITLE: Synthesis of primary, secondary and tertiary alkylthio-ynye alcohols 1

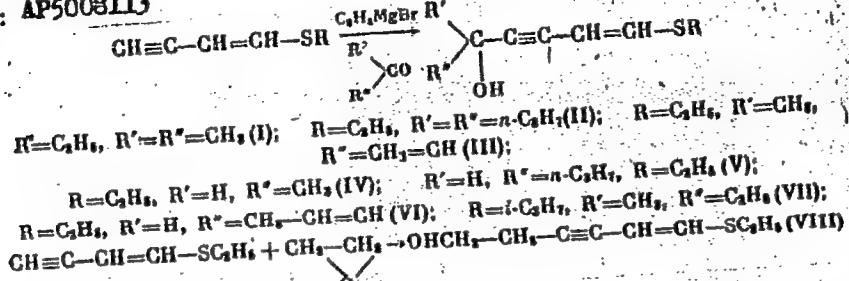
SOURCE: AN SSSR. Izvestiya. Seriya khimicheskaya, no. 2, 1965, 363-365

TOPIC TAGS: alkylthioalcohol, olefinic acetylenic alcohol, conjugated unsaturated alcohol, primary alcohol synthesis, secondary alcohol synthesis, tertiary alcohol synthesis, ethynylvinylthioalcohol, Grignary reaction

ABSTRACT: Conjugated olefinic-acetylenic primary, secondary and tertiary thioether alcohols were prepared by the reaction of ethynylvinylthioethyl and ethynylvinyl-thioisopropyl alcohol with acetone, di-n-propyl ketone, methylvinyl ketone, a cetaldehyde, n-butylaldehyde, crotonaldehyde or ethylene oxide. The thioether alcohols were obtained via the organomagnesium compounds generated in the presence of  $C_2H_5MgBr$  and the products were identified by elemental analysis and infrared spectroscopy. Physical properties were measured and tabulated. Yields of 16.5-71% of the theoretical were produced, the reaction proceeding by the general formula

Card 1/2

L 37669-65  
ACCESSION NR: AP5008113



Orig. art. has: 1 table and 9 formulas.  
ASSOCIATION: Institut organicheskoy khimii im. N. D. Zelinskogo Akademii nauk  
SSSR (Institute of Organic Chemistry, Academy of Sciences, SSSR)

SUBMITTED: 12Jun64 ENCL: J0

SUB CODE: OC

NO REF SOV: 010

OTHER: 000

OTHER:

Card 2/2 *hs*

L 29293-66 EWP(j)/EWT(m)/T RM  
ACC NR: AP6019317

SOURCE CODE: UR/0079/65/035/008/1350/1357

AUTHOR: Vasil'yev, G. S.; Prilezhayeva, Ye. N.; Bystrov, V. F.; Shostakovskiy, M. F.

ORG: Institute of Organic Chemistry im. N. D. Zelinskiy, AN SSSR (Institut organicheskoy khimii AN SSSR)

TITLE: Structure of products of the reaction of (alkoxy)alkylthiobutenynes with phosphorus pentachloride

SOURCE: Zhurnal obshchey khimii, v. 35, no. 8, 1965, 1350-1357  
TOPIC TAGS: phosphorus chloride, chemical reaction, proton resonance, organic sulfur compound

ABSTRACT: Synthesis by other methods and study of proton magnetic resonance spectra indicated that addition of  $PCl_5$  to 1-alkylthio-(alkoxy)butenynes takes place at the triple carbon-carbon bond with the formation of chlorides of 1-alkylthio(alkoxy)-3-chlorobutadiene-1,3,4-phosphinic acids. It was established for the first time that addition of alcohols to diacetylene under the conditions of a nucleophilic reaction proceeds stereospecifically with the formation of cis-1-alkoxybutenynes. The reaction of diacetylene with one molecule of a thiol (MeSH) under nucleophilic conditions also resulted in a product (1-Me-thiobutynone) with a cis-structure. It was shown that in products of the addition of  $PCl_5$  to

UDC: 547.261

Card 1/2

3/  
B

L 29293..66 -

ACC NR: AP6019317

1-alkylthio(alkoxy)butenyne the hydrogens at 1-C and 2-C are in a trans-position to each other. A mechanism of electrophilic interaction between  $PCl_5$  and 1-alkylthio(alkoxy)butenyne is proposed which explains the cis-trans-isomerization that takes place in its course. Orig. art. has: 4 figures, 5 formulas, and 1 table. [JPRS]

SUB CODE: 07, 20 / SUBM DATE: 29Jun64 / ORIG REF: 007 / OTH REF: 010

Card 2/2 CC

PAUL PAYNE, M.D.; JOHN, T.A.; CHRISTOPHER, L.P.

Liquefaction of sulfur, sulfide, and sulfite  
in pyrolysis. J. Am. Chem. Soc. 35:124-126, 1913.

PILENKOVA, Ye.N.; AYOVSKAYA, V.A.; GORYAIN, L.V.; PETYARINA, Yu.S.;  
ANDRIANOVA, G.; SHOSTAKOVSKIY, B.F.

Diene condensation of divinyl sulfone, sulfoxide, and sulfide  
with hexachlorocyclopentadiene. Zhur. osn. khim. 35 no.1:39-42  
(MIRA 18:2)  
Ja '65.

SHOSTAKOVSKIY, N.F.; VIANOV, V.M.; MIRSKOV, R.G.; PETROVA, V.N.

Oxygen-containing acetylenic organotin compounds. Part 9:  
Synthesis and transformations of organotin acetylenic ethers.  
Zhur. ob. khim. 35 no.1:47-51 Ja '65.

(MIRA 18:2)

I. Irkutskiy institut organicheskoy khimii Sibirskogo otdeleniya  
AN SSSR.

DR. V. V. VASIL'YEV, A.F.; ATAVIN, A.S.; AL'PERT, M.L.; IENGALEEV, G.Y.

Reactivity of aldehydic hydrates. Reaction of enolal propanal  
nemiacetal with vinyl butyl ether. Zhur. ob. khim. 35, no. 1:  
198-204 (1965).

1. Irkutskiy institut organicheskoy khimii sibirskego otdeli-nya  
AN SSSR.

L 32654-65 EWT(m)/EPF(c)/EWP(j) PC-4/PR-4 RM  
 ACCESSION NR: AP5005553 S/0079/65/035/002/0335/0338

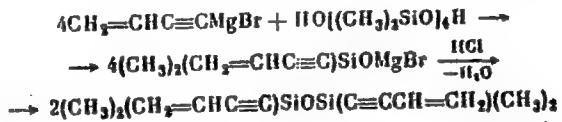
AUTHOR: Shostakovskiy, M. F.; Komarov, N. V.; Maroshin, Yu. V.

TITLE: The interaction of polyorganosiloxanes with Iotsich's reagent

SOURCE: Zhurnal obshchey khimii, v. 35, no. 2, 1965, 335-338

TOPIC TAGS: polyorganosiloxane, silicoorganic compound, Iotsich reagent, acetylenic Grignard reagent, magnesium bromovinylacetylene, dialkylsilanone, acetylenic silanol

ABSTRACT: The reaction of polorganosiloxanes with acetylenic Grignard compounds (Iotsich's reagent) was studied experimentally studied in order to investigate the observed effects of structure on reactivity and establish a possible reaction mechanism. The organometallic compounds were prepared in dry ether and reacted by heating with siloxanes. Magnesiumbromovinylacetylene (I), prepared from magnesium, bromoethane and vinylacetylene, was reacted with octamethyl-1, 4-dihydroxytetrasiloxane in ether solution to give 47.8% tetramethyl-1, 2-di(vinylethynyl)disiloxane by the reaction:



Card 1/2

20  
B

L 32654-65  
ACCESSION NR: AP500553

(I) reacted with polymethylethylsiloxane to give methylethylvinylethylnylsilanol, and dimethyl, ethyl, diethyl- and diisopropylvinylacetylenic silanols were similarly prepared. Pentamethylphenylethylnylsiloxane was prepared by reacting polydimethylsiloxane, trimethylchlorosilane and an organometallic compound obtained from magnesium, bromoethane and phenylacetylene; (I) was reacted with acetone and trimethylchlorosilane to give 1,1-dimethylpenten-4-yne-2-hydroxytrimethylsilane, and 1,1-dimethylpenten-4-yne-2- and 1-methyl-1-ethylpenten-4-yne-2-hydroxymethylethylsilane were produced by similar reactions. The results suggest that the reactions require the presence of a terminal hydroxyl in the reacting siloxanes, as indicated by previous studies, acetylenic magnesiumbromosilanolate being formed as an intermediate in the synthesis of acetylenic silanols or of symmetric or asymmetric acetylenic siloxanes. The analogous formation of magnesiumbromoalcoholates under similar conditions suggested the presence of "dialkylsilanones" of the formula  $R_2SiO$ , and the existence of multiple silicon-oxygen bonds in such intermediates is tentatively proposed. Orig. art. has: 11 formulas.

ASSOCIATION: None

ENCL: 00

SUB CODE: OC

SUBMITTED: 08Aug63

OTHER: 000

NO REF Sov: 007

Card 2/2

L 27289-65

EPR(m)/EPR(c)/EPR(j)/EPR(t)/EPR(b) PC-4/Pr-4 IJP(c) JD/RM

ACCESSION NR: AP5005574

S/0080/65/038/002/0435/0436

24

AUTHOR: Shostakovskiy, M. F.; Komarov, N. V.; Yarosh, O. G.

22

TITLE: New preparative method for silicon acetylides

B

SOURCE: Zhurnal prikladnoy khimii, v. 38, no. 2, 1965, 435-436

TOPIC TAGS: silicon acetylide, ethynylsilane, preparation

ABSTRACT: A simple and convenient preparative method employing readily available starting materials has been developed for ethynyl-silanes. A trialkylchlorosilane is treated with  $H_2SO_4$  to form the bis(trialkylsilyl) sulfate which, in turn, is reacted with monosodium acetylide in an inert solvent with heating to form the ethynylsilane [SM]

In 65-75% yield. Orig. art. has: 6 formulas.

ASSOCIATION: none

SUBMITTED: 12Jun63

ENCL: 00

SUB CODE: GC

NO REF SOV: 005

OTHER: 004

ATD PRESS: 3191

Card 1/1

L 41576-65

EMT(m)/EPF(c)/EPF(j)/T

PC-4/Pr-4

R1

ACCESSION NR: AP5008839

S/0079/65/035/003/0466/0468

29

AUTHOR: Shostakovskiy, M. F.; Atavin, A. S.; Trofimov, B. A.; Vyalykh, Ye. P.

28

B

TITLE: Synthesis of silicon-containing cyclic acetals 1SOURCE: Zhurnal obshchey khimii, v. 35, no. 3, 1965, 466-468

TOPIC TAGS: acetal, silicon organic compound, organic synthesis

ABSTRACT: A combination of a silicon atom with metadioxane rings may produce substances with new useful properties. For the synthesis of silicon-containing cyclic acetals a study was made of reactions of pentaerythrate monocycloacetal, trimethylethane monocycloacetal and glycerin monoacetal with dimethyldiacetoxysilane. The yield of the desired products ranges from 30 to 60%. The macromolecular silicon organic side products contain acetal cycles in the side chains. Trimethylethane and glycerin monocycloacetals react with dimethyldiacetoxysilane producing two substances: ethers of dimethylacetoxysilanes and symmetrical bis(metadioxane) or bis(metadioxolane) ethers of dimethylsilanediols. In the reaction of acetal and trimethylethane monocyclobenzal with dimethyldiacetoxysilane, 2,5-dimethyl-5- and 5-methyl-2-phenyl-5-(dimethylacetoxysilyl)-1,3-dioxane were obtained respectively.

Card 1/2 Submitted: 11 Nov 63

L 48979-65 EWT(m)/EPP(c)/EWP(j)/T

PC-4/P-4 RM

ACCESSION NR: AP5009663

UR/0062/65/000/003/0528/0529

AUTHOR: Shapiro, E. S., Shostakovskiy, M. F.TITLE: Chemical reactions of phthalylglycine vinyl ester

SOURCE: AN SSSR. Izvestiya. Seriya khimicheskaya, no. 3, 1965, 528-529

TOPIC TAGS: phthalylglycine, vinyl ester, vinyl phthalylglycinate, halogen addition, olefin addition, unsaturated ester, thioacetic acid, pyrrolidonylthiethylthiol, hexachloro-cyclopentadiene

ABSTRACT: The addition of bromine and chlorine to phthalylglycine vinyl ester produced phthalylglycine  $\alpha$ ,  $\beta$ -dibromoethyl ester ( $C_{12}H_9O_4NRR_2$ ) and  $C_{12}H_9O_4NCI_2$ , respectively. The addition of thioacetic acid and  $\beta$ -pyrrolidonylthiethylthiol to phthalylglycine vinyl ester yielded, respectively, phthalylglycine  $\beta$ -acetylthioethyl ester ( $C_{14}H_{13}NO_5S$ ) and phthalylglycine  $\beta$ -pyrrolidonylthiethyl ester ( $C_{18}H_{20}O_5N_2S$ ). The reaction of hexachloro-cyclopentadiene with phthalylglycine vinyl ester formed 1, 4, 5, 6, 7, 7-hexachloro-2-phthalylglycylbicyclo[2.2.1]-5-heptine ( $C_{17}H_9O_4NCI_6$ ). All the syntheses are described.

ASSOCIATION: Institut organicheskoy khimii im. N.D. Zelinskogo Akademii nauk SSSR  
(Institute of Organic Chemistry, Academy of Sciences, SSSR)

Card 1/2

L 48979-65

ACCESSION NR: AP5008663

SUBMITTED: 22Jun64

ENCL: 00

SUB CODE: OC, 00

NO REF SOV: 005

OTHER: 002

Card

2/2

SHOSTAKOVSKIY, M.F.; SKVORTSOVA, G.G.; DOMNINA, Ye.S.; GLAZKOVA, N.P.

Some features of vinylindole chlorination in halogenation reactions.  
Izv. AN SSSR. Ser. khim. no.3:529-531 '65. (MIRA 18:5)

1. Irku'skiy institut organicheskoy khimii Sibirskogo otdeleniya  
AN SSSR.

SHOSTAKOVSKY, M.F.; ATAVIN, A.S.; TROFIMOV, B.A.; LAVROV, V.I.

Reaction of the addition of glycols and polyethylene glycols to  
vinyl butyl ether. Zhur. eh. khim. 35 no.4:613-615 Ap '65.  
(MIRA 18:5)

I. Irkutskiy institut organicheskoy khimii Sibirskogo otdeleniya  
AN SSSR.

SHOSTAKOVSKIY, M.F.; CHEKULAYEVA, I.A.; KONONOV, N.F.; ZARUTSKIY, V.V.;  
OSTROVSKIY, S.A.; ARAKELYAN, V.G.

Triethanolamine vinylation reaction. Izv, AN SSSR. Ser. khim. no.4:  
698-701 '65. (MIRA 18:5)

1. Institut organicheskoy khimii im. N.D.Zelinskogo AN SSSR.

L 58907-65 EWT(m)/EPF(c)/EMP(j)/T Pe-4/Pr-4 RH

28

ACCESSION NR: AP5017060

UR/0289/65/000/001/0088/0092

27

547.381:541.64

AUTHOR: Shostakovskiy, M. F.; Belyayev, V. I.; Okladnikova, Z. A.; Vasil'yeva, I. V.; Serebrenikova, E. V.TITLE: Polymerization of acrolein under the influence of organomagnesium compounds

SOURCE: AN SSSR. Sibirskoye otdeleniye. Izvestiya. Seriya khimicheskikh nauk, no. 1, 1965, 88-92

TOPIC TAGS: acrolein polymer, organomagnesium compound, polymerization catalyst, Grignard reagent

ABSTRACT: The following polymerization catalysts were considered: ethylmagnesium bromide, isopropylmagnesium bromide, butylmagnesium bromide, isobutylmagnesium bromide, and phenylmagnesium bromide. Isobutylmagnesium bromide produced the highest yield of acrolein polymer (12%), and hence was the only catalyst used in subsequent experiments, which involved the determination of the effect of catalyst concentration, temperature, and duration of the reaction on the polymerization. The acrolein polymers obtained were found to contain 35-41% of unsaturated C=C bonds and 7-8 mole % of free aldehyde groups, which indicates an active participation of these groups in the formation of polymers. Infrared spectra showed the presence of bands at 900-1130, 1690-1720, and

Card 1/2

L 58907-65

ACCESSION NR: AP5017060

1640-1680  $\text{cm}^{-1}$ , corresponding to ether groups, aldehyde groups, and C=C bonds, respectively. In addition to solid polymers, 5-20% of low-molecular viscous polymers (MW about 200) were formed. X-ray diffraction analysis showed that the solid polymers consisted of a mixture of amorphous and crystalline structures. Orig. art. has: 2 figures and 3 tables.

ASSOCIATION: Irkutskiy institut organicheskoy khimii Sibirskogo otdeleniya AN SSSR  
(Irkutsk Institute of Organic Chemistry, Siberian Branch, AN SSSR)

SUBMITTED: 18Nov63

ENCL: 00

SUB CCDE: OC

NO REF Sov: 006

OTHER: 010

Card

2/2

SIDEL'KOVSKAYA, F.F.; AVETISYAN, A.A.; SHOSTAKOVSKII, M.F.

Lactones and lactams. Report No.25: Allylthiolactams. Izv. AN  
SSSR. Ser. khim. no.4:702-708 '65. (MIRA 18:5)

1. Institut organicheskoy khimii im. N.D.Zelinskogo AN SSSR.

SHOSTAKOVSKIY, M.F.; VLASOV, V.M.; LOZHENITSYNA, A.S.; GAVRILOVSKAYA, A.A.

Synthesis of primary-tertiary acetylenic  $\alpha$ -glycols. Izv. AN SSSR.  
Ser. khim. no.4:709-712 '65. (MIRA 18:5)

1. Irkutskiy institut organicheskoy khimii Sibirskogo otdeleniya  
AN SSSR.

L 40701-65 EPF(c)/EWP(j)/EWT(m) PC-4/Pr-4 RM

UR/0079/65/035/004/0750/0750

ACCESSION NR: AP5010793

20

B

AUTHOR: Shostakovskiy, M. F.; Vlasov, V. M.; Mirskov, R. G.

TITLE: Synthesis of acetylenic organotin compounds

SOURCE: Zhurnal obshchey khimii, v. 35, no. 4, 1965, 750

TOPIC TAGS: organotin compound, acetylenic organotin compound, alkyne, acetylene derivative, organomet

ABSTRACT: A new preparative method has been developed for organotin compounds of the type  $R_3SnC\equiv CR$ . First, trialkyltin halides are treated with powdered NaOH or KOH, then with acetylenic compounds containing an acetylenic hydrogen atom. Presumed intermediates are trialkyltin hydroxides and hexaalkylstannoxyanes (hexaalkyltin oxides), which react with acetylenic compounds. Triethylphenylethynyltin was obtained in 80% yield from triethyltin chloride and phenylacetylene. [VS]

ASSOCIATION: Irkutskiy institut organicheskoy khimii Sibirskogo otdeleniya Akademii nauk SSSR (Irkutsk Institute of Organic Chemistry of the Siberian Department of the Academy of Sciences, SSSR)

Card 1/2